



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,877	02/07/2005	Yukihiko Fujita	NGB-37577	2135
116 7590 06/07/2010 PEARNE & GORDON LLP 1801 EAST 9TH STREET SUITE 1200 CLEVELAND, OH 44114-3108			EXAMINER LE, BRIAN Q	
			ART UNIT	PAPER NUMBER
			2624	
			MAIL DATE	DELIVERY MODE
			06/07/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/523,877

Applicant(s)

FUJITA ET AL.

Examiner

BRIAN Q. LE

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/22)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/29/2010 has been entered.

Response to Amendment and Arguments

1. The rejection of claim 19 under 35 U.S.C. 101 is withdrawn.

1. Applicant's arguments with regard to claims 1-2, 4-5, 7-10, 12 and 17-20 have been fully considered, but are not considered persuasive because of the following reasons:

Regarding the Applicant's argument (page 10 of the Remarks) that the cited prior arts do not teach separating the individual characters. The Examiner respectfully disagrees. As explained in the Final Office Action filed 12/31/2009. Newman teaches a character frame includes vertical marks and horizontal lines to be used for separating each of the individual characters (FIG. 13 and column 6, lines 10-15, "...bounding boxes of text objects in the image..."). Myers also teaches this concept (FIG. 11 and page 5, column 2, [0069]). Additionally, in this Office Action, the Examiner will also point out that Adachi Juji et al. JP 10-069524 teaches this feature.

Regarding the Applicant's argument (page 11 of the Remarks) that the Examiner has made an improper interpretation of the language "at the time of capturing the continuous still image" and thus the cited references do not teach this language. The

Examiner respectfully disagrees. Beside previous citation, Newman also teaches this concept "at the time of capturing (at the time that viewfinder update image) the continuous still image (update continuously from imaging array) (FIG. 4 and column 4, lines 30-40).

The Examiner believes that all the arguments of the Applicant have been properly addressed and explained. Thus, the rejections of all of the claims are maintained.

Information Disclosure Statement

1. The information disclosure statement filed 04/29/2010 and 05/27/2010 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because a copy of the translation is required if a written English-language translation of a non-English-language document, or portion thereof, is within the possession, custody, or control of, or is readily available to any individual designated in § 1.56(c) (see 37 CFR 1.98). It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claim 20 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 20 defines a "memory", and the corresponding specification disclosure does not exemplify what a memory covers. Given the broadest reasonable interpretation consistent with the specification and the state-of-the-art, a "memory" covers both transitory and non-transitory computer-readable media, such as a "signal" and a tangible memory device respectively. Signals and other transitory media are non-statutory per se (*In re Nuijten*). The examiner suggests amending the claim to recite "non-transitory computer readable medium" to limit the scope to only statutory media, which would overcome this rejection.

Examiner's Note

1. Examiner has cited particular columns and line numbers or figures in the references as applied to the claims below for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant, in preparing the responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 4-5, 7-10, 12, and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of U.S. Patent 6,473,523 by Newman et al. ("Newman"), Myers et al. U.S. Pub. No. 2002/0051575, and further in view of Adachi Fuji et al. JP 10-069524.

Regarding claim 1, Newman discloses a character recognition processing device (figures 1-2), comprising:

A photographing unit which photographs a plurality of character images using a continuous photographing operation in which a continuous still image is captured and automatically divided into the plurality of character images [the Applicant discloses that a photographing unit that captures continuous image can be a CCD camera (see page 4, line 8 and column 16, line 20). Newman also teaches a CCD camera (see column 3, lines 20-35) and thus has capability to capture continuous still image. Additionally, Newman discloses a concept of continuous still images (see FIG. 4, S2)], wherein each character image comprises a plurality of characters (FIG. 13);

an image fetching unit, which fetches image data of the plurality of character image as objects to be recognized, the plurality of character images being photographed for recognizing at least one character (S10, figure 6);

a cursor information output unit, which outputs cursor position information showing a position of a character frame, wherein the character frame includes vertical marks and horizontal lines to be used for separating each of the at least one character {Newman teaches a character frame includes vertical marks and horizontal lines to be used for separating each of the

Art Unit: 2624

individual characters (FIG. 13 and column 6, lines 10-15, "...bounding boxes of text objects in the image...."). Additionally, Myers also teaches this concept (F"G. 11 and page 5, column 2, [0069])) corresponded with the plurality of character images from each other (S101, figure 12: cursor position information is read);

a display that simultaneously displays a cursor, which includes the character frame, with the continuous still image at the time of capturing the continuous still image [Newman teaches this limitation by show a concept of capture an image with displayed characters in a viewfinder ("display character frame with an image at the time of capturing the mage") and disclose a cursor that includes a character frame (FIG. 6, S11, S14, S15 and FIG. 13)] (FIG. 4 and column 4, lines 30-40);

a layout analyzing unit, which collates the cursor position information with the fetched image data of the plurality of character images to analyze an arrangement of at least one the character (S102, figure 12: cursor crosshairs are collated with the image data and displayed, such as in figure 13);

a character cutting unit, which extracts the plurality of character image on the basis of the analyzed result of the layout analyzing unit (S121, figure 14: an area of character data (text) is extracted according to the cursor positioning, as shown in figure 13, and copied into storage for further processing); and

a character recognizing unit, which recognizes the extracted plurality of character images as the at least one character and converts the extracted plurality of character images to character information (S124, figure 14).

Additionally, the Examiner utilizes the teaching of Myers et al. to further indicate that it is obvious to one of ordinary skill in the art that character recognition processing device can easily utilize a camera system to capture a digital still image (digital still camera) (Myers et al. page 2, column 2, [0027]) to capture continuous still image (frame-to-frame of still images) (Myers et al. page 2, column 2, [0028]). Also, Myers et al. teaches a character image can comprises a plurality of characters (FIGs. 4-5) and thus the ability to recognize individual characters (page 3, [0033]), extraction of individual character ([0040-0045]) and arrangement of individual characters ([0040-0045]). Thus, modifying Newman's method of character recognition processing according to Myers would be able to yield more robust recognition performance ([0008]). This would improve processing and therefore, it would have been obvious to one of the ordinary skill in the art to modify Newman according to Myers.

Note, while Newman teaches a character frame includes vertical marks and horizontal lines to be used for separating each of the individual characters (FIG. 13 and column 6, lines 10-15, "...bounding boxes of text objects in the image..."). Additionally, both Myers and Adachi Juji et al. also teach this concept (Myers, FIG. 11 and page 5, column 2, [0069]) (Adachi, FIG. 5 and FIG. 8). Thus, modifying Newman's method of character recognition processing according to Myers and Adachi would be able to yield more robust recognition performance (Myers, [0008]) and achieve accurate results for individual frame/character/text object (Myers, abstract). This would improve processing and therefore, it would have been obvious to one of the ordinary skill in the art to modify Newman according to Myers and Adachi.

Regarding claim 2, Newman discloses when the character image as the object to be recognized is configured by a plurality of character images obtained by a continuous photographing operation, the image fetching unit fetches the image data of the character images respectively by a prescribed area from all of the character images; and wherein the layout analyzing unit collates the cursor position information with the fetched image data of each of the plurality of character images separately (figure 4: the camera continuously feeds images of the character (text) data to the viewfinder to be displayed with the crosshairs superimposed thereon).

Regarding claim 4, Newman discloses a portable terminal device having the character recognition processing device according to any one of claims 1 to 3 (figure 1).

Regarding claim 5, please refer back to claim 1 for further teachings and explanations.

Regarding claim 7, Newman discloses a recognized character display unit (viewfinder 4) which displays, on said display, the character information as a recognized result by the character recognizing unit (figure 3: "DISPLAY TEXT").

Regarding claim 8, Newman discloses the recognized character display unit individually selectively displays the character information as the recognized result by a prescribed character unit (i.e. the DISPLAY TEXT routine selectively displays the results of the OCR operation on the viewfinder 4).

Regarding claim 9, Newman discloses a recognized character storing unit which stores the character information as the recognized result obtained by the character recognizing [sic] unit (S129, figure 14).

Regarding claim 10, Newman discloses the recognized character storing unit stores the character information in a recognized character storing area (figure 15).

Regarding claim 12, Newman discloses a recognized character utilizing unit which utilizes the character information as the recognized result obtained by the character recognizing unit in accordance with the type of the character information (i.e., viewfinder 4 utilizes the recognized result and displays it according to the type of characters that were recognized).

Regarding claim 17, Newman discloses the portable terminal device wherein the character recognizing unit separately recognizes each of the extracted plurality of character images (i.e., Newman's camera is capable of taking multiple images of text data and performing OCR on each of those images, respectively) (FIG. 14; column 4, lines 15-24 and column 6, lines 17-35).

Regarding claim 18, Newman discloses wherein the character recognizing unit has a plurality of recognizing modes that each correspond with a type of character information; and wherein the character recognizing unit carries out a character recognizing process suitable for the corresponding type of character information in accordance with a preset recognizing mode (figure 3: text and image-plus-text modes; no translate, auto-translate, and select language modes).

Regarding claim 19, please refer back to claim 1 for further teachings and explanations.

Regarding claim 20, Newman discloses a character recognition processing program in which the respective steps defined in claim 19 are executed by a computer (program performed by CPU 21, figure 2), wherein said program is stored within a memory device that is accessible by the computer (ROM/RAM) (column 3, lines 50-55).

3. Claims 3 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of U.S. Patent 6,473,523 by Newman et al. ("Newman"), Myers et al. U.S. Pub. No.

2002/0051575, Adachi Juji et al. JP 10-069524 and further in view of U.S. Patent Application Publication 2003/0169923 by Butterworth ("Butterworth").

Regarding claims 3 and 16, Newman discloses when the character image as the object to be recognized is configured by a plurality of character images obtained by a continuous photographing operation, the image fetching unit fetches the image data of the character images respectively by a prescribed area from all of the character images; wherein the layout analyzing unit collates the cursor position information with the image data (figure 4: the camera continuously feeds images of the character (text) data to the viewfinder to be displayed with the crosshairs superimposed thereon).

However, Newman does not appear to teach that the plurality of fetched character images is connected together, as claimed.

Butterworth discloses a system for capturing partial images of an area of text and then stitching them together as shown in figure 4. In particular, Butterworth teaches that "OCR requires high definition images. For some documents, several hundred thousand pixels or more may be required to obtain the desired recognition accuracy. However, some digital cameras, such as some digital cameras for cell phones, may only have a small number of pixels (e.g., 352x288). In such limited-pixel systems, only a small portion of a document can be imaged at a high enough resolution for OCR. Multiple images of a document can be "stitched" together to create a larger image with more pixels. Then, OCR can be performed on the larger image." (paragraph [0003]). In view of this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Newman by Butterworth to capture text images that are

"connected" in order to stitch them together to form a text image/file of the overall text area that can be displayed with crosshairs according to Newman's method.

4. Claims 11, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of U.S. Patent 6,473,523 by Newman et al. ("Newman"), Myers et al. U.S. Pub. No. 2002/0051575, Adachi Juji et al. JP 10-069524 and further in view of U.S. Patent Application Publication 2002/0131636 by Hou ("Hou").

Regarding claim 11, Newman does not appear to disclose registering the character information in a data base corresponding to a type of each character information when the type of the character information is any one of a telephone number, a mail address and a URL (Uniform Resource Location). Regarding claims 13 and 14, Newman does not appear to disclose when the type of the character information is the telephone number/mail address, the recognized character utilizing unit displays a transmitting screen to the telephone number/preparing screen for an email, as claimed.

Hou discloses a PDA that is operable to scan business cards and the like and extract information therefrom via OCR. In particular, when telephone numbers or email addresses are extracted, the PDA is able to recognize them as such and store them in a database for later use. In addition, the scanned information can be displayed (figure 2B) along with icons (218, 220) that allow a user to place a phone call or initiate an email when pressed. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Newman by Hou to achieve the claimed invention by registering email addresses and phone numbers in a database and displaying a transmitting screen for a phone number or a preparing screen for an email address when either is recognized on a portable imaging device having communications

capabilities since registering such information in a database for later use and displaying such screens facilitates automatic communication with a recognized telephone number or email address.

5. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of U.S. Patent 6,473,523 by Newman et al. ("Newman"), Myers et al. U.S. Pub. No. 2002/0051575, Adachi Juji et al. JP 10-069524, and further in view of U.S. Patent 7,188,307 by Ohsawa ("Ohsawa").

Regarding claim 15, Newman does not appear to disclose when the type of the character information is the URL (Uniform Resource Locator), the recognized character utilizing unit displays a network connecting screen to the URL.

Ohsawa discloses a system for imaging text (character strings) and then extracting URLs from the text data for automatic access thereto. In particular, Ohsawa teaches that it is desirable to automatically access a webpage when a URL is identified in an image so that a user does not have to manually open a browser to access the site (columns 1/29-35; 7/61-65). In view of this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Newman by Ohsawa to achieve the claimed invention by displaying a network connecting screen to a recognized URL.

Conclusion

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

1. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRIAN Q. LE whose telephone number is (571)272-7424. The examiner can normally be reached on 8:30 A.M - 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samir Ahmed can be reached on 571-272-7413. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Brian Q Le/
Primary Examiner, Art Unit 2624
6/3/10